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ABSTRACT

This study examined father-infant and mother-infant relationships by observing infants and parents in their homes. The subjects were 20 infants, 10 boys and 10 girls, 7 and 8 months of age. Each infant was visited twice when both parents were at home. All visits were made by the same two persons: a male observer, who maintained a narrative account of infant and adult behaviors and a female visitor, who provided an alternative interactive partner for the child. Comparisons were made between the frequencies of affiliative- and attachment behaviors (including smiling, looking, vocalizing, reaching, approaching, and seeking to be held) which were directed by the infant toward each adult. Results of multivariate analyses showed a significant preference by infants for their fathers over their mothers and the visitor, and for their mothers over the visitor. When data were compared on the individual measures, neither parent emerged as a preferred attachment object but there was far more affiliative type interaction with father than mother. It was noted that fathers also engaged in more physically stimulating and unpredictable games. The author suggests that the prominence of play in the father-infant relationship helps to make the father a person with whom interaction is pleasurable, varied, and unpredictable. (Author/BRT)

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INFANT ATTACHMENT TO MOTHERS AND FATHERS*

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INFANT ATTACHMENT TO MOTHERS AND FATHERS.

The assessment of the infant's attachment to his mother has been a topic of considerable interest to developmental psychologists in recent years (Ainsworth, 1973), but far less attention has been given to the nature of the relationship between the infant and his father. Since most children are raised in nuclear families containing both a mother and a father, it appears that in focusing so narrowly on the mother-infant interaction, we may have ignored a relationship which is of great importance (Lamb, 1975a).

In attempting to remedy this situation, I decided to examine the father-infant relationship by way of a longitudinal study based on a number of observations of the infants in their homes. The data I shall present today are derived from the first two of these observations, which took place when the subjects were seven and eight months of age.

We chose this age as our starting point because, according to Bowlby's (1969) theory of attachment, the infants should have been forming their first (and primary) attachment to their mothers at this age. Thus, the preference for the mothers should be clearly evident, since the attachments to the fathers, if they existed at all, should be vastly inferior in quality. In addition, this is an age sometimes seen as the beginning of a period of "stranger anxiety", and our design permitted an evaluation of the sociability with strangers as well.

The subjects were 20 infants, 10 boys and 10 girls, recruited from the birth records of the Yale New Haven Hospital. They were equally distributed across the upper four of the five classes on Hollingshead's (1957) Two Factor Index of Social Position.

Each infant was visited at times when both parents were at home with the child. In general, this meant that most visits took place in the evening or on weekends, at the discretion of the parents. All visits were made by the same two persons, a male Observer and a female Visitor. The Observer dictated into a tape-recorder a detailed narrative account of the infant's behavior and the contingent behavior of others, taking particular care to note each time an attach-

ment behavior (Ainsworth, 1964; Bowlby, 1969) was directed to one of the persons present. While the Observer withdrew completely from interaction with the parents and the child, the Visitor interacted with them, providing an alternative interactive partner for the child. It was hoped that this would assure us of a sampling of the typical interaction between the child and his parents when visitors were present. When subsequently questioned, most of the parents stated that we had managed to achieve this.

The narratives recorded by the Observer were subsequently transcribed by a typist, and analyzed by 15-second time periods. Infants were observed for a mean of 153.5 minutes, but the analyses reported today are based on the 122.25 minutes per infant (mean) during which both parents and the investigators were simultaneously present in the room, and could thus serve as targets for the display of attachment behaviors by the infants.

The transcripts were searched for each instance of one of the following attachment behaviors directed towards Mother, Father, Visitor, or Observer: smiling to, vocalizing to, looking at, laughing at (with), touching, seeking to be picked up by, reaching to, and fussing to. It was also noted whether the infant was being held by or was within 3 feet of any of the adults. Thus, proximity to the adult was also regarded as an attachment behavior, as was approaching, which was defined as a movement from beyond to within 3 feet of the person. For looking, vocalizing, smiling and laughing, separate tallies were made for those behaviors which were directed when the child was close to (i.e. within 3 feet of) or distant from (beyond 3 feet of) the person concerned. Touching, being within proximity, and being held by were only coded once in every 15-second unit as a precaution against possible artificial inflation of the data. The estimate of proximity was adjusted (by subtraction) for the amount of time that the infants were being held.

Assessment of the data collection procedures was made by arranging for the Observer and a naive assistant to observe, simultaneously and independently,

several mother-father-infant triads in a laboratory playroom, and then comparing the reports of the Observer with those of the assistant. In all categories except smiling, the rate of agreement was above 90%; in the case of smiling the agreement was 75%, with the Observer consistently reporting more smiling to both parents. Reliability in the tabulation of the behaviors was also high, ranging from 82% to 95% for the behavior categories. When the distinction between close and distant behaviors was eliminated, the rate of agreement was somewhat higher.

Though the data were derived from two observations of each child, there was no difference in behavior at the two ages, and consequently the data have been combined for the purposes of analysis.

To equalize the contribution of each infant to the group data, the scores for each infant on each measure were converted into rates per minute, and Table 1 displays the rates of attachment behaviors to mother, father and Visitor.

Insert Table 1 here

A repeated-measures multivariate analysis of variance (MANOVA) using the rates of smiling, vocalizing, looking, laughing, touching, fussing, reaching, seeking to be held, approaching, and proximity (adjusted for the time that infants were being held) as variables was computed to determine whether there was a consistent preference for any person. The results showed a significant preference for the fathers over the other two persons ($p < .001$, $p < .014$ for the two roots). Further MANOVAs comparing mother with father, mother with Visitor, and father with Visitor, showed that the fathers were preferred to the mothers ($p < .05$) and to the Visitor ($p < .05$), while the mothers were preferred to the Visitor ($p < .01$). Univariate repeated measures ANOVAs were then computed on the individual measures. The infants smiled ($p < .05$), vocalized ($p < .001$) and looked ($p < .005$) at their fathers more often than at their mothers, and tended ($p < .10$) to reach to and laugh in interaction with them more often than with their mothers.

The other measures showed no significant differences.

In comparing the father-infant and Visitor-infant interaction, univariate tests showed that the infants vocalized to ($p < .05$), touched ($p < .01$) and fussed to ($p < .01$) their fathers more often than the Visitor, while also tending to reach towards him more often ($p < .10$).

Finally, the data showed that the infants sought to be held by ($p < .01$) and fussed to ($p < .001$) their mothers more often than the Visitor, and also tended ($p < .10$) to touch their mothers more often. On the other hand, they looked ($p < .01$) and tended to smile ($p < .10$) more often at the Visitor.

Insert Table 2 here

The preference patterns can be seen more clearly on Table 2. Notice that the discrimination of the Visitor from the parents is clearest on those measures related to close physical contact and the desire for it. Both parents are preferred to the Visitor on such measures, but in addition to this, the fathers are preferred to both the Visitor and the mothers in the display of distal attachment behaviors.

It is valuable at this point to consider the distinction drawn by Bretherton and Ainsworth (1974) between the affiliative and attachment systems. Whereas infants may affiliate with many familiar persons other than attachment figures, there are certain behaviors and certain types of interaction which are restricted largely to intercourse with attachment figures. On both conceptual and empirical grounds (Tracy, Lamb, & Ainsworth, 1974) the best examples would be the desire to be held by someone, and the desire to be near someone when distressed. Inspection of Table 2 makes plain that neither parent is preferred to the other on measures of this nature, but both are preferred to the Visitor. Clearly, while the Visitor is an attractive person with whom to interact, the infants readily distinguish her from the parents.

The comparison between the two parents is also interesting. While neither

mother nor father emerges as a preferred attachment object on these four measures, there is far more affiliative-type interaction with father than with mother. What this suggests is that neither mothers nor fathers are superior attachment figures in this situation, but that fathers are just more fun.

Thus far, I have made no reference to the parents' behavior. We did analyze the parent's contribution to the interaction in the contexts of play and physical contact, and these analyses have been reported elsewhere (Lamb, 1975b). To summarize them briefly: there was evidence that the types of interaction in the mother-infant and father-infant dyads differed qualitatively. The response to play with father was significantly more positive than with mother, but this was clearly because fathers engaged the infants in more physically stimulating and unpredictable games. Likewise, the fathers picked up their infants mainly to play with them, not to perform caretaking functions, and consequently the response to physical contact was also more positive with fathers.

I began this research aiming to address the question with which most persons in this area appear to be concerned (e.g. Cohen & Campos, 1974; Kotelchuck, 1972) namely: is there any evidence that mothers are preferred to fathers, as Bowlby's (1969) notion of monotropy predicts. As the project proceeds, I become increasingly convinced that this question is an inappropriate one to ask, and indeed one to which we are unable to formulate general conclusions because of the inadequacy of the measures at our disposal (Lamb, 1974; Weinraub, Brooks, & Lewis, 1975). The issue should not be: is mother more important than father, for that depends on how you define and measure importance; rather the issue should be: in what ways are fathers important. Certainly, I think that the data we are gathering indicate that both parents are "important" but far more interestingly, they imply that the nature of mother-infant and father-infant interaction differ.

We intend to direct our attention in the course of this study to characterizing the relationships, and thereby determining in what ways mothers and

fathers are contributing to social development. I believe we can no longer accept the implicit assumption that fathers are simply occasional mother-substitutes: rather, they may have an important role to play in socialization which is independent of the mothers' -- a role which has been almost totally ignored by students of infancy. A tentative hypothesis (more fully detailed in Lamb, 1975a) based on the results of previous research and the present study, is that the prominence of play in the father-infant relationship contributes to a definition of the father as a person with whom interaction is pleasurable, varied and unpredictable. Thus defined, the father serves to introduce the child to the world beyond the home, and determines the attitude with which the child approaches the world. The tentative nature of the hypothesis underlines the need for further research on the role of the father in both infancy and childhood. I am convinced, though, that these efforts will substantiate my belief that the infant's social world is far more complex and multidimensional than we are accustomed to portraying it.

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Table 1

Mean rates per minute of display of attachment behaviors

Behavior	Mother	Father	Visitor
Smiles	0.140	0.276	0.220
Vocalizes	0.052	0.108	0.064
Looks	0.868	1.240	1.196
Laughs	0.040	0.092	0.056
Approach	0.036	0.036	0.040
Proximity[a]	1.912	1.640	1.884
Reaches to	0.020	0.040	0.020
Touches	0.116	0.156	0.064
Seeks to be held	0.016	0.008	0.000
Fusses to	0.036	0.032	0.004

[a] Excluding time when the infants were being held

Table 2

Patterns of preferences in the display of attachment behaviors

Behavior	M vs F	F vs V	M vs V
Vocalizes	F > M***	F > V*	-
Smiles	F > M*	-	V > M+
Looks	F > M**	-	V > M**
Laughs	F > M+	-	-
Approach	-	-	-
Proximity[a]	-	-	-
Reaches	F > M+	F > V+	-
Touches	-	F > V**	M > V+
Seeks to be held	-	-	M > V**
Fusses to	-	F > V**	M > V***

[a] Excluding time when infants were held

*** $p < .001$

** $p < .01$

* $p < .05$

+ $p < .10$